

providing all the pending claims, as they now stand,  
incorporating the changes indicated below.

Rewrite the following claims:

1     --1. (Twice Amended) A method of processing and storing  
2     data in a computer system including processor circuitry,  
3     and a data storage device, the method comprising the steps  
4     of:  
5             storing first and second sets of records in  
6     separate first-in, first-out data structures, respectively,  
7     on the data storage device, the first and second sets of  
8     records being of different data resolutions and  
9     corresponding to overlapping periods of time;  
10            operating the processor circuitry to receive data  
11    collected over a period of time; and  
12            operating the processor circuitry to update, in  
13    parallel, at least one record in each of the stored first  
14    and second sets of records with the received data such that  
15    a previous record included in each of the first and second  
16    data structures is replaced.

1     7. (Amended) [The method of claim 5] A method of  
2     processing and storing data in a computer system including  
3     processor circuitry, and a data storage device, the method  
4     comprising the steps of:  
5             storing first and second sets of records in  
6     separate first-in, first-out data structures, respectively,  
7     on the data storage device, the first and second sets of  
8     records being of different data resolutions and  
9     corresponding to overlapping periods of time;

10           operating the processor circuitry to receive data  
11 collected over a period of time; and

12           operating the processor circuitry to update at  
13 least one record in each of the stored first and second  
14 sets of records with the received data such that a previous  
15 record included in each of the first and second data  
16 structures is replaced;

17           periodically collecting network traffic data, wherein  
18 the collected network traffic data includes byte and packet  
19 count information associated with each of a plurality of  
20 monitored conversations between devices included in the  
21 computer system;

22           storing the collected network traffic data in a  
23 buffer; and

24           operating the processor circuitry to retrieve network  
25 traffic data from the buffer, the retrieved network traffic  
26 data being received by the processor circuitry;

27           [,] wherein the step of operating the processor  
28 circuitry to update at least one record in each of the  
29 stored first and second sets of records [including]  
30 includes the steps of:

31                   updating a record corresponding to a first  
32 conversation in the first set of records; and

33                   updating a record corresponding to the first  
34 conversation in the second set of records.

1       12. (Twice Amended) A method of collecting and processing  
2 network traffic data, comprising the steps of:

3                   periodically collecting network traffic data from  
4 a data probe,

5           generating a database of network traffic  
6 information from the collected network traffic data, the  
7 database comprising a plurality of network traffic data  
8 sets of differing degrees of data resolution corresponding  
9 to overlapping network traffic time periods,

10          storing each of the plurality of network traffic data  
11 sets in a different first-in, first-out data structure  
12 wherein a limited amount of data storage space is used for  
13 each of the different first-in, first out data structures,

14          updating, in parallel, at least one record in the  
15 different first-in, first-out data structures with the  
16 collected network traffic data, and

17          overwriting the oldest data records in the first-  
18 in, first-out data structure used to store one of the  
19 network traffic data sets, when the limited amount of data  
20 storage space used for said first-in, first-out data  
21 structure is filled with records.

1    17. (Twice Amended) A system for monitoring network  
2 traffic data, comprising:

3           a plurality of network traffic data probes for  
4 collecting network traffic information;

5           processor circuitry coupled to the network  
6 traffic probes for receiving data therefrom; and

7           a data storage device for storing a network  
8 traffic database generated by the processor circuitry using  
9 data collected by the network traffic data probes, the data  
10 storage device including:

11          a plurality of data structures, each data  
12 structure being a first-in, first-out data structure, each